

Abstract Of The Disclosure:

5 A satellite system employing time diversity and a single frequency network of terrestrial re-radiation stations is provided wherein each terrestrial re-radiation station inserts a delay into a terrestrial signal. The delay allows the time of arrival of the early time diversity
10 signal at the center of terrestrial coverage to coincide with the arrival of the corresponding late time diversity signal, thereby improving hand-off between terrestrial and satellite signals at a receiver. The delay also adjusts for distance differences between each terrestrial re-radiation station and the satellite and between each station and the center of the terrestrial coverage region. This adjustment optimizes the TDM-MCM reception by synchronizing at the center
10 of the SFN the phase of the MCM signals re-radiated from the re-radiating stations of the SFN. The delay also compensates for the processing delay encountered when converting a satellite LOS TDM stream into a multicarrier modulated stream for transporting the satellite LOS TDM stream to user receivers and for the diversity delay between the early and late signals.

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